

Supplemental Material to:

Nicholas G. Spiropulos and Jennifer M. Heemstra

**Templating effect in DNA proximity ligation enables use of
non-bioorthogonal chemistry in biological fluids**

Artificial DNA: PNA & XNA 2012; 3(3)

<http://dx.doi.org/10.4161/adna.23842>

**[http://www.landesbioscience.com/journals/artificialdna/
article/23842](http://www.landesbioscience.com/journals/artificialdna/article/23842)**

SUPPORTING INFORMATION

for

Templating Effect in DNA Proximity Ligation Enables use of Non-Bioorthogonal Chemistry in Biological Fluids

Nicholas G. Spiropulos and Jennifer M. Heemstra*

Department of Chemistry and the Center for Cell and Genome Science, University of Utah, Salt Lake City, Utah 84112, United States

*Corresponding Author: heemstra@chem.utah.edu

Table of Contents

MALDI-TOF Spectra.....	Fig.S1
Denaturing PAGE showing dose-dependent ligation.....	Fig. S2
Yield of ligated product as a function of quinine concentration	Fig. S3
HPLC of DNA 1	Fig. S4

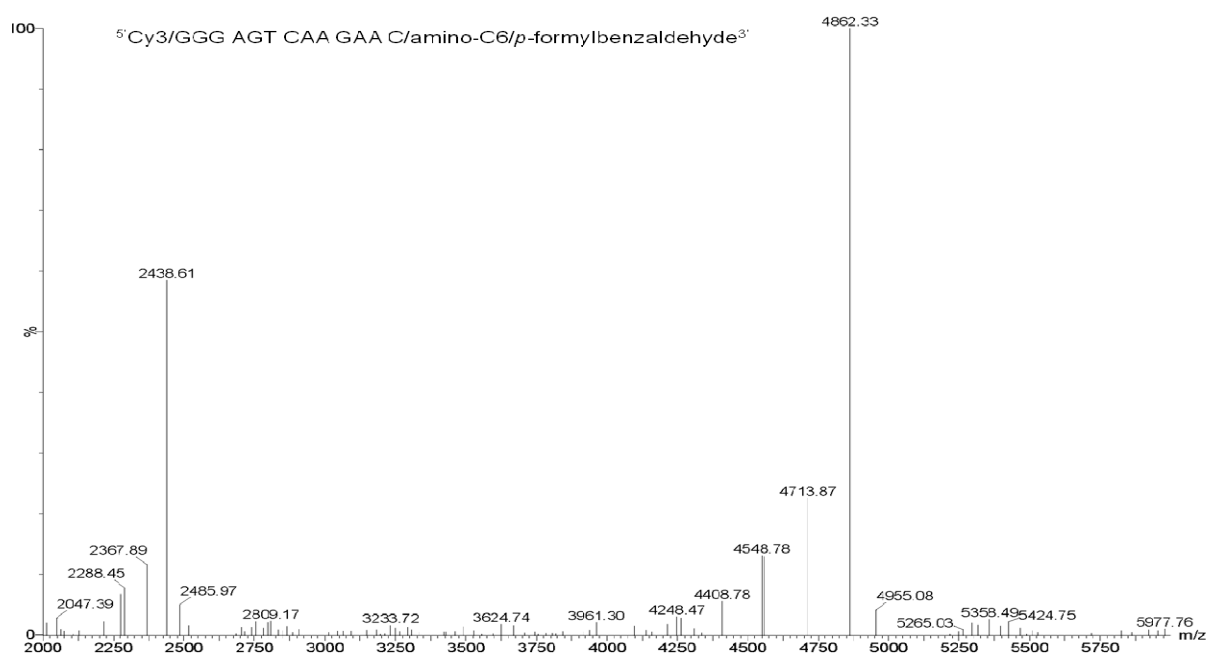
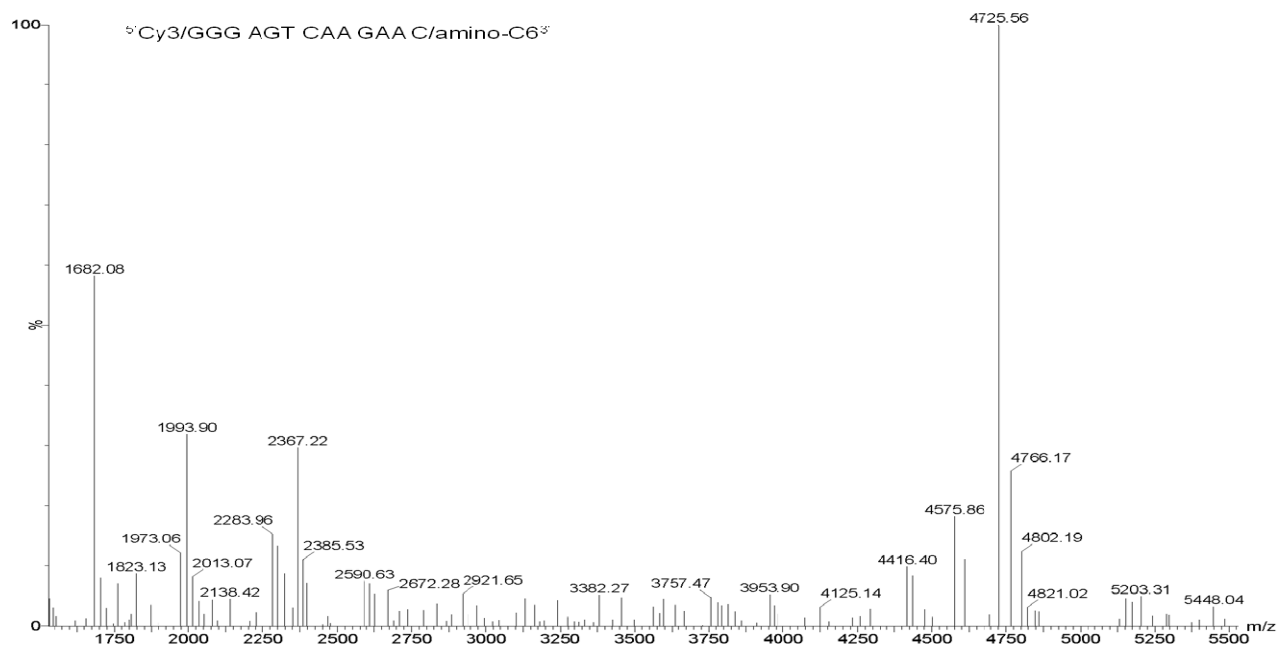


Fig. S1. MALDI-TOF Spectra. DNA **1** was analyzed by MALDI-TOF in linear positive mode. The calculated $[M+H]^+$ 4859, found 4862. Regular starting strand DNA found 4726.

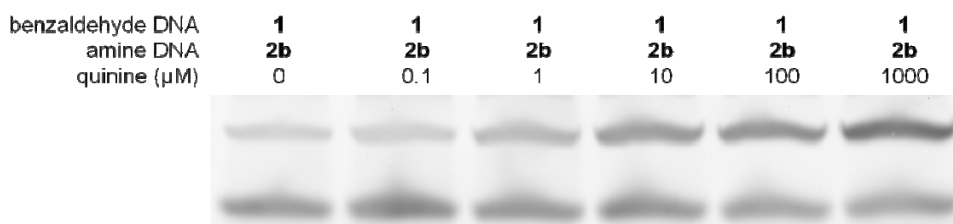


Fig. S2. Denaturing PAGE Showing Quinine Dose-Dependent Ligation. Conditions: 0.5 μM **1**, 2.0 μM **2b**, 30 mM TAPS, pH 8.2, 15 mM NaCl, 100 mM NaBH₃CN, 1.5 h at 22 °C.

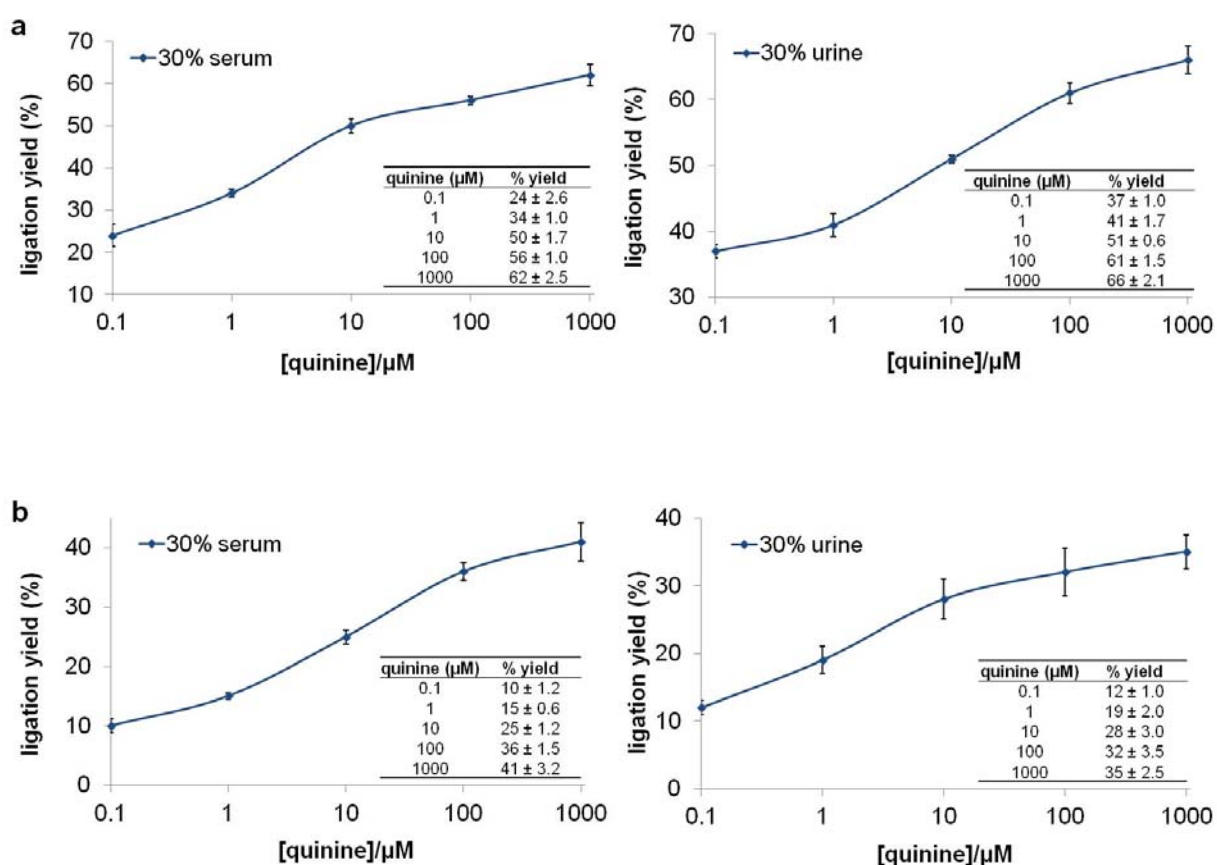


Fig. S3. Yield of Ligated Product as a Function of Quinine Concentration. Error bars represent standard deviation of three independent trials. Conditions in 30% serum or 30% urine: **a)** 0.5 μM **1**, 2.0 μM **2b**, 30 mM TAPS, pH 8.2, 15 mM NaCl, 100 mM NaBH₃CN, 1.5 h at 22 °C. **b)** 0.5 μM **1**, 2.0 μM **2b**, 30 mM TAPS, pH 8.2, 15 mM NaCl, 100 mM NaBH₃CN, 1.0 h at 22 °C.

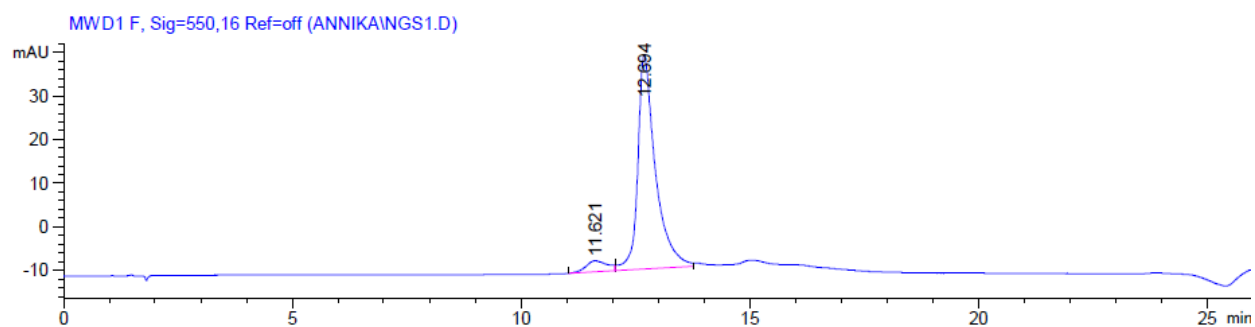


Fig. S4. HPLC Spectrum of DNA 1. HPLC was set at a 2 mL/min flow rate starting with 95:5 TEAA:acetonitrile and changing to 70:30 TEAA:acetonitrile over a period of 16 minutes. DNA **1** was collected at a retention time of 12.694 minutes.